

Much of the information requested by the FCC is specific to individual franchise areas served by the selected cable systems. Quite commonly, a single cable television system serves adjacent communities or areas that, from the perspective of local franchising authorities, consist of separate franchises. That a cable operator's service territory may consist of several contiguous franchises is normally irrelevant to the operations of a cable system. The operator customarily provides the same set of service options throughout the service area, charging a price for each that does not vary from one franchise to another. But since "competition", as defined by the FCC, can sometimes be present in one of a cable system's franchise areas and not others, the basic unit of observation in the database developed by the FCC is the cable franchise. For each of the sampled cable systems, the FCC requested information on the "primary" franchise and, if the system's service territory consisted of more than one franchise, a second franchise. A system's "primary" franchise was defined by the FCC as the franchise drawn in the sample. The "secondary" franchise was to be chosen to favor examples of effective competition, different channel line-up or prices, and large subscriber size. Of the 687 systems returning valid questionnaires, 267 reported on only a primary franchise and 420 reported on a primary and secondary franchise.

After compiling the data reported by the surveyed cable systems, the FCC then selected a subset of the responses, which it used to develop the competitive benchmarks. Although the details of this winnowing process remain imprecise, the following steps were apparently employed. First, the FCC eliminated cable franchises for which the reported data contained important omissions. From the remaining franchises, it then selected all randomly selected "first" franchises and all franchises satisfying the "effective competition" criteria.

The benchmarks themselves are expressed in terms of the average price per channel a cable system would be allowed to charge for basic cable services. Many cable systems offer two or more basic service packages, often referred to as tiers. In such instances, the basic service prices charged by a cable operator would be tested by comparing its subscriber-weighted average price per channel to the benchmark price for systems having its attributes. In the example below, the weighted average price per channel is 82.9¢, according to the FCC formula, which involves dividing the subscriber-weighted average price by the subscriber-weighted number of channels. The subscriber-weighted price is \$11.60 ( $10 \times \frac{500}{500} + 8 \times \frac{100}{500} = 11.6$ ) and the subscriber-weighted number of channels is 14 ( $10 \times \frac{500}{500} + 20 \times \frac{100}{500} = 14$ ), which gives 82.9¢ ( $\frac{\$11.60}{14} = 82.9¢$ ).

<u>Tier</u>	<u>Price</u>	<u>Subscribers</u>	<u>Channels</u>
Basic	\$10	500	10
Expanded Basic	\$8	100	20

Using the sub-sample of the cable system franchises it selected, the FCC developed its benchmarks by estimating an equation relating the average price per channel charged by a cable system in a franchise area, calculated in this fashion, to four factors: (1) system subscribers, (2) number of channels available in all regulated tiers, (3) number of satellite delivered channels in all regulated tiers, and (4) whether effective competition exists in the franchise. The resulting equation was then translated by the FCC into a series of tables displaying the benchmark price as a function of attributes of cable systems. Examples of FCC benchmarks are displayed in the following table.

### Benchmark Price/Channel, 200 Subscribers

[illegible]

To evaluate whether benchmarks are likely to provide systems with the opportunity to recover their costs, it is helpful to address the following questions.

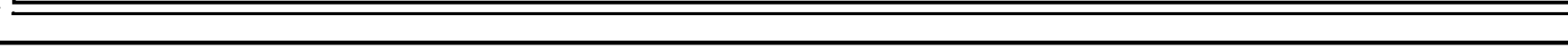





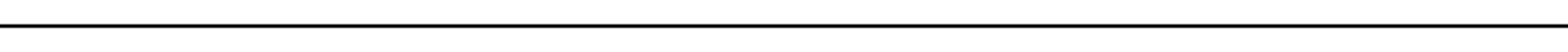



1. Are the data used to construct the benchmarks accurate?
2. Are the service prices charged by the "competitive" systems in the sample adequate for those cable systems to recover their costs?
3. Is the sample of competitive systems sufficiently large to produce a statistically reliable measure of "competitive" prices?
4. Do the benchmarks take into account all of affecting service costs that would be necessary to prevent the benchmark prices from falling below service costs for some cable systems?

It is true that, in the new regulatory environment, a cable system feeling that the benchmark applicable to it is unreasonably low would be afforded the opportunity of justifying its prices by reference to its cost of service. Thus, it might appear that the reasonableness of the benchmark prices should not be of great concern. But that overlooks the consideration that many cable systems, especially small ones, frequently do not have the detailed cost records, extending back in time, that firms accustomed to cost-based rate regulation are in the practice of keeping. Even those small systems that have maintained and preserved the necessary cost records would have to prepare whatever analyses are required to implement the methodology that is adopted to estimate service costs. The burden that would be imposed on such systems of developing a cost-of-service justification makes it quite important that a system of benchmark regulation establish reasonable price caps.

I will now turn to a discussion of what I see as some of the deficiencies of the FCC benchmarks.

1. Inaccurate Data

The portrayal of service prices, subscriber numbers and channel carriage contained in the FCC's database is not always accurate. That is clear from spot checks performed under my direction and also from a comparison of the FCC database with a "corrected" version of the database prepared by the National Cable Television Association. It would be very laborious to develop a systematic evaluation of the error rates in the FCC database, the average size of the errors



The FCC designated three tests to determine whether a franchise is characterized by "competitive" prices. Cable service qualified as "competitive" if it satisfied any of those conditions, which the FCC characterizes as categories A, B, and C.

Category A: Service penetration in the franchise area is no greater than 30%

Category B: Competing systems serve the franchise<sup>1</sup>

Category C: The franchise contains a municipal cable system<sup>2</sup>

For brevity, I will refer to these criteria of competition as, respectively, 30% penetration, overbuilds, and municipal systems.

The equation used by the FCC to generate the benchmarks is estimated from a sample containing only 45 small "competitive" cable systems — not a terribly large number to provide a firm foundation for regulating the prices charged by every small system in the country. Within the group of small competitive systems, there are only two representatives of systems having between 500 and 750 subscribers, and only five with between 750 and 1000. There are various ways of quantifying the imprecision small sample size introduces in the development of competitive benchmarks. One useful measure relates to the variable in the FCC's equation characterizing whether or not a service is "competitive".

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<sup>1</sup> More precisely, to qualify as competitive by this test, a rival system must cover 50% of the franchise and obtain a penetration rate above 15%.

<sup>2</sup> More precisely, the "franchise authority" must offer a video programming service that is available in over 50% of the franchise area.

**Table 1: Small Systems in the FCC Sample**

System Subscribers	Not Competitive	Competitive			Category Total
		30% Penetration	Private Overbuilds	Municipal Markets	
0 to 50	4	5	0	1	10
50 to 100	5	7	0	0	12
100 to 250	19	7	4	1	31
250 to 500	25	9	0	4	38
500 to 750	15	1	1	0	17
750 to 1000	9	3	2	0	14
<b>TOTAL</b>	<b>77</b>	<b>32</b>	<b>7</b>	<b>6</b>	<b>122</b>

According to the FCC's analysis, service prices are 9% lower in "competitive" franchises, other factors equal. In other words, if two systems have identical numbers of subscribers and channels, but one operates in a "competitive" franchise and the other does not, the FCC would predict that service prices in the competitive franchise would be 9% lower. But in actuality, that estimate is subject to some uncertainty, which can be quantified. The probability is 95% that franchise competition reduces prices somewhere between 3.5% and 14.1%. In calculating its benchmarks, the FCC has assumed that competition uniformly reduces service prices by 9%, which is close to the midpoint of this interval. But we can be 95% sure only that the "correct" benchmark prices are somewhere between 3.5% and 14.1% below the prices charged in systems classified as non-competitive.

Even the figure of 45 almost certainly overstates the number of cable systems in the database capable of providing a reliable guide to "competitive"

prices. Six of the small cable systems qualify as competitive because they are municipally owned or compete with a municipal cable system. But in those markets, prices may well be below the cost of a private sector operator, because municipal cable services have unique cost advantages. In addition, six of the seven private overbuilds involving small systems have existed five years or less (five of these have been competing less than four years). Such short-term competition is typically characterized by price wars, during which prices are held below average total cost. If the short-term overbuilds (lasting five years or less) and markets involving municipal systems are removed, the FCC sample contains only 33 small "competitive" cable franchises.

#### **Small Systems with Competitive Franchises**

<u>Competition Criteria</u>	FCC Data	Clean FCC Data
30% Penetration	32	32
Private Overbuilds	7	1
Municipal Franchises	6	0
Total	45	33

### **3. Inappropriate Choice of Benchmark Systems**

Markets involving municipal cable systems and short-term overbuilds cannot be expected to provide a reliable guide to the prices that characterize sustainable competition between private cable systems. A municipal cable system has cost advantages unavailable to private cable systems, including access to inexpensive finance (tax exempt bonds), use of public rights-of-way at no charge, and exemption from franchise fees and property taxes. These considerations would lead to the expectation that prices charged by municipal



systems tend to be lower than the prices charged by competing private cable systems.

That does indeed seem to be true of the cable systems in the FCC database. The "competition" variable in the FCC's benchmark equation indicates whether the system qualifies as being classified as competitive by any of the three FCC tests (30% penetration, private overbuild, municipal system). We replaced that single variable in the analysis by separate variables indicating whether or not the system (a) had a penetration rate of 30% or less, (b) was involved in a private overbuild, or (c) was a municipal system. With that reformulation, we re-estimated the FCC equation. The results revealed that basic service prices charged by municipal systems are almost 15% below prices charged by competing private systems, other factors equal.

It is also questionable whether some of the prices charged by competing private systems provide a suitable basis for developing benchmark prices. Cable overbuilds almost invariably precipitate price wars far more drastic than the price competition that occurs in most markets. The reason is not hard to find. The fixed costs of providing cable service are quite high, consisting essentially of the distribution system. Once those costs are incurred, the variable cost of serving subscribers is relatively low. When cable systems compete head-to-head, each has an incentive to drop its price as low as the variable cost of service, a low figure, if the alternative is to lose subscribers to the rival cable system.

As a case in point, one of the overbuild cable systems in the FCC database is charging \$1.85 for its second tier, which contains 26 satellite-

transmitted channels of programming. We determined the channel line-up (the FCC did not ask for such information) and calculated the programming fees that the system would incur for each tier 2 subscriber. That cost alone, assuming the program fees had been charged at "rate card", would have amounted to over \$2.70 per subscriber – substantially above the price being charged by the operator for the service. In practice, cable systems often obtain substantial discounts from a channel supplier's rate card. But even then, this case provides a clear example of a price that is unsustainable over the long run. Benchmarks reflecting price wars could clearly prevent cable systems from recovering their service costs, and the resulting regulation would provide no incentive to continue to supply cable service.

Competitive benchmarks should be developed from instances of enduring competition, in which the rival cable systems have moved beyond the price-war stage to reach a sustainable price equilibrium that allows each to recover its fixed as well as variable service costs. Price wars typically characterize the early few years of an overbuild situation. After that, either some form of consolidation of the two systems occurs or competition persists, but with each rival increasing its price to a sustainable level.

Evidence of this can be found in the FCC database. We re-estimated a modified version of the FCC equation, using only those cable systems involved in an overbuild situation, and we added a variable describing how long competition had persisted in each instance. I found that in franchises where the duration of competition was five years or less prices were 30% lower than in those franchises where competition had endured at least six years. The statistical reliability of this difference is extremely high, which means there is

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little doubt that the prices associated with short-term competition are substantially lower than the prices that have emerged from more durable competition.<sup>3</sup>

Removing either municipal markets or short-term overbuilds from the FCC's sample and re-estimating the benchmark equation causes the benchmark prices to increase. When both are removed, the benchmarks for small systems increase by 13%.

#### **Small System Benchmarks, Eliminating Questionable Systems**

<b>Excluding franchises where</b>	<b>Increase in Benchmark Prices</b>
competition is recent (5 years or less)	5.5%
competition involves municipalities	4.4%
competition is recent or involves municipalities	13%

#### **4. Benchmark Prediction Errors**

If a benchmark equation is to impose reasonable caps on the prices charged by regulated systems, the equation must be able to portray accurately the prices charged by the competitive systems intended to serve as the benchmarks. The reason, on reflection, is clear. Suppose that cable systems A and B are identical in every respect, except that B directly competes with another cable system. The general theory of benchmark regulation would then

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<sup>3</sup> In this analysis, a number of alternative values were tested as candidates for defining the boundary between short-term competition and long-term sustainable competition. The tested boundaries were one year, two years, three years, and so forth, through fifteen years. The boundary point having the greatest explanatory power (R-squared) was five years.

say that the price charged by B provides the appropriate benchmark for regulating A's price. That is true because the two systems provide identical services and operate in identical environments, so the price charged by B reveals the price that A would charge if it, also, were operating in a competitive market.

But, pursuing this example, the benchmark that the FCC plans to apply to system A is not the price charged by B, but rather the price that the FCC's equation predicts that B charges. That makes it important for the benchmark equation to be able to predict accurately the prices charged by the "competitive" systems. To revert again to the previous example, suppose more concretely that system B charges \$20 per month for basic service, but the FCC's equation predicts that it charges \$16 per month. Then system A would be limited to a \$16 price, even though the correct benchmark is \$20. This problem would not arise, obviously, if the equation correctly predicted the prices charged by competitive systems. Whether the FCC equation does accurately predict "competitive" prices is therefore quite important.

In order to accurately predict competitive service prices, it is necessary to take into account all of the factors significantly influencing the price formation in competitive markets. For example, cable distribution plant installed underground is considerably more expensive than aerial distribution, and the proportion of plant underground varies widely from one system to another. If that factor has an important influence on prices charged in competitive markets, but is ignored by the equation used to predict competitive service prices, it is quite unlikely that the predictions made by the equation would be very accurate. The FCC equation predicts service prices in competitive markets by taking into account

only three factors: the number of subscribers, the number of channels, and the number of satellite-delivered channels.

Whether those three variables are adequate to accurately predict competitive prices is ultimately an empirical matter. The ideal test would be to draw a new, random sample of "competitive" cable systems and determine how accurately their prices are predicted by the FCC equation. An easier test is to examine how well the FCC equation predicts the prices of "competitive" systems in its database. Since the equation is based importantly on those particular systems, I would expect it to predict those prices more accurately than prices charged by a new sample of competitive cable systems, or competitive systems in general. In other words, if the equation does not predict accurately the prices of competitive systems in the sample from which it was estimated, it is even less likely to do so when applied to competitive systems in general.

A comparison of the prices charged by small competitive cable systems in the FCC sample with the prices predicted for those systems by the FCC equation reveals some large errors. The FCC's benchmark equation is incapable of accounting for almost one-half of the price variations among small cable systems. Of the 45 small competitive cable systems in the FCC sample, the FCC's benchmark equation understates the prices charged by 20 of the systems and overstates the prices of the remainder. Both types of errors, of course, are undesirable. But errors in the direction of understating the prices actually charged by the benchmark systems are more serious, since they raise the possibility that comparable systems subject to regulation will be incapable of recovering their costs, and thus threatened with the prospect of going out of business.

The outcome that 20 of the 45 small competitive systems used by the FCC are themselves above the FCC benchmarks can be viewed from a different perspective. Although "noncompetitive" systems charging the same rates would have to reduce their prices, the "competitive" systems do not.

Of the 20 small competitive systems with higher than predicted rates, their prices exceeded by 26% the prices predicted by the FCC equation, on average. To examine these underestimates in more detail, I arranged the 20 cable systems in the order of how much their prices exceeded the predicted prices, and then divided the ordered list into groups of five. I then calculated, for each group of five, the average amount by which the actual price exceeded the price predicted by the FCC. The results are displayed on the following table.

Actual Competitive Prices Relative to Benchmark Prices

1st Quartile	4.2% higher
2nd Quartile	12.3% higher
3rd Quartile	17.4% higher
4th Quartile	85.6% higher

The lowest quartile charges prices that exceed the FCC benchmarks by an average of 4%. But prices charged by competitive systems in the fourth quartile are fully 85% above the FCC's benchmarks. It is difficult to resist the conclusion that, in such instances, the FCC benchmarks would deprive small cable systems of the opportunity to recover the cost of providing service.

  
William Shew

Executed on June 10, 1993

## **CABLE TELEVISION STUDIES AND TESTIMONY OF BILL SHEW**

### **A. Rate of Return Regulation**

1. Development of a methodology to identify the appropriate measure of basic service cost, in the context of regulating the rate of return cable systems earn on basic service (rate case).
2. Analysis of the appropriate treatment of start-up costs in determining permissible prices under rate of return regulation (rate case).

### **B. Cost of Service**

1. Regression analysis of the cost structure of 120 cable systems, as it relates to population density, channel capacity, subscribers, etc.
2. Study of average total cost and incremental cost of supplying basic, enhanced basic, and pay services, using engineering and accounting data.
3. Estimation of the cost of capital to a cable company, using variants of CAPM.

### **C. Competition Issues/Antitrust**

1. Analysis of whether cable television is a natural monopoly and whether direct competition is viable and desirable (predatory pricing suit).
2. Analysis of whether a cable overbuild is commercially sustainable over the long run.
3. Analysis of whether merger of competing cable systems is in the public interest (FTC investigation).
4. Study of the market in which cable television competes (state regulation).
5. Statistical analysis of the market in which premium movie channels compete, and whether vertically integrated cable companies (programming, distribution) engage in discrimination (antitrust suit).

6. Assessment of the appropriate public policy governing non-cable distributors' access to "cable" channels (FCC docket).

7. Comparison of the profitability of cable television with television and radio stations and cellular telephone (FCC inquiry into the need to regulate cable television).

**D. Valuation of Cable Franchises**

1. Evaluation of the potential profitability of large cable franchises tendered by the British government.

2. Valuation of three cable television franchises (IRS tax court).

3. Valuation of combined franchise holdings of MSO (IRS tax proceeding).

4. Valuation of cable franchises in California (state property tax).

**E. Cable Programming**

1. Analysis of the profitability of cable distribution to a broadcast network.

2. Estimation of the price structure for distant signal imports, if the compulsory license were abolished.

3. Assessment of how the statutory rates for distant signal imports should be altered by the restoration of syndicated exclusivity.

4. Definition of the markets in which program inputs to cable television compete.

**F. Miscellaneous**

1. Statistical analysis of consumer impacts of cable franchise requirements.

2. Profitability of interactive video and telephone services



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### **PROFESSIONAL BACKGROUND:**

1992-Present	<b>ARTHUR ANDERSEN ECONOMIC CONSULTING</b> <u>Director of Economic Studies</u> Specializing in the economics of the media, telecommunications, market regulation, and competition policy.  <b>AMERICAN ENTERPRISE INSTITUTE FOR PUBLIC POLICY RESEARCH</b> <u>Visiting Scholar</u> Research on communications markets and regulatory policy.
1989-1992	<b>PUTNAM HAYES &amp; BARTLETT, INC.</b> <u>Director</u> Specialized in the economics of telecommunications, the media, market regulation, and competition policy.
1974-1989	<b>NATIONAL ECONOMIC RESEARCH ASSOCIATES, INC. (NERA)</b> <u>Vice President</u> Conducted research on the economics of television, telecommunications, energy, and regulation.
1969-1973	<b>UNIVERSITY OF LONDON</b> <u>Lecturer</u> (Assistant Professor) Taught undergraduate and graduate welfare economics and international trade; supervised the international economics program.

## **PUBLICATIONS AND CONFERENCE PAPERS:**

- **"Telecommunications Infrastructure: Is There a Role for Government?", The American Enterprise Institute (forthcoming).**
- **"Copyright Harmonization and Efficient Trade in Films", British Screen Advisory Council Conference on EC Copyright Policy, London, February 1993.**
- **"In Search of Leisure," The American Enterprise Institute, September 1992.**
- **"Trends in The Organization of Program Production," Paying for Broadcasting, Routledge Press, 1992.**
- **"Auctioning the Airwaves," The American Enterprise Institute, September 1991.**
- **"Measuring Pluralism, Diversity and Concentration in a Multi-Media Society," European Conference on the Press, Brussels, May 1991.**
- **"Peak-Responsibility Methodology for Regulating Telephone Prices," Telecommunications Deregulation, Quorum Books, 1990.**
- **"Antitrust Analysis of Shared Financial Networks," NERA Antitrust and Trade Regulation Seminar, Santa Fe, New Mexico, July 1989.**
- **"Market Mechanisms to Allocate Radio Spectrum," University of Canterbury, Christchurch, New Zealand, July 22, 1988.**
- **"Current Issues in Telecommunications Regulation: Pricing" (with Alfred E. Kahn), The Yale Journal on Regulation, Spring 1987.**
- **"Pricing Local Calls: How Much Imperfection Is Perfect?" Telecommunications in a Competitive Environment, NERA, Phoenix, Arizona, March 6, 1987.**
- **"The Profit Outlook for Cable Television in Britain," The Economist Intelligence Unit's Conference on Cable and Satellite Television, Birmingham, England, September 13, 1983. Reprinted in Cable and Satellite Television: Risk, Reward and Reality, Spencer House, London, 1984.**
- **"Can Cabling Britain Be Profitable?" Cable Television Conference, Hyde Park Hotel, London, England, April 14, 1983.**
- **"How to Assess the Value of Electricity Reliability," EPRI Seminar on the Value of Service Reliability to Consumers, Boston, Massachusetts, April 5-7, 1983.**
- **"A Methodology for Determining Optimal Generating Capacity," EPRI Workshop on Value of Reliability, Mackinac Island, Michigan, October 1979.**

- "The Cost of Inadequate Generating Capacity," Edison Electric Institute, "Shortage Costs," Asilomar, California, September 1978.
- "Supply and Demand," Edison Electric Institute, "Shortage Costs," Asilomar, California, September 1978.
- "Conventional Energy Resource II Topical Meeting, American Nuclear Society, September 1978.
- "Costs of Inadequate Capacity in the Electric Utility Industry," Energy Systems and Policy, 1977.
- "Load-Management Potential -- An Overview," Load Management, Federal Energy Administration Conservation Paper No. 24, 1975.
- "The Economic Dilemma for Consumers and the Utilities," Cornell University Energy Forum, January 1975.

#### **SELECTED TESTIMONY:**

- Analysis of the New York market for advertising, in connection with request for waiver of the newspaper/broadcast cross ownership rule, FCC, April 1993.
- Sadler Enquiry into Standards of Cross-Media Promotion, 1990/91.
- "Tobin's Q for Cable Television, Media and Telecommunications: A Comparative Assessment," FCC inquiry into Competition, Rate Deregulation and Commission's Policies Relating to the Provision of Cable Television Service (MM Docket No. 89-600), April 2, 1990.
- "The Value of Three Cable TV Franchises," Docket No. 268-89, U.S. Tax Court, December 20, 1989.
- Testimony in FCC Price-Cap Proceeding, on behalf of BellSouth (CC Docket No. 87-313) (with Alfred E. Kahn), July 26, 1988.
- Alternative Regulatory Frameworks for Local Exchange Carriers, presented before the Public Utilities Commission of the State of California (I. 87-11-033), February 26, 1988.
- Reply Testimony in FCC Price-Cap Proceeding (CC Docket No. 87-313), (with Alfred E. Kahn), December 4, 1987.
- Cable Television Competition in Connecticut, testimony presented before the Department of Public Utility Control (DPUC), (with Alfred E. Kahn), November 13, 1987.
- BellSouth Testimony in FCC Price-Cap Proceeding (CC Docket No. 87-313), (with Alfred E. Kahn), October 19, 1987.

- **"Regulation of the Scrambling of Satellite Television Signals,"** FCC Inquiry into the Scrambling of Satellite Television Signals and Access to those Signals by Owners of Home Satellite Dish Antennas, Docket No. 86-336 (with Paul L. Joskow), November 10, 1986.
- **Regulation of Entry into the Market for Cellular Mobile Service,** Federal Communications Commission, March 1984.
- **Rental Value of a Hydroelectric Site,** testimony before the Federal Energy Regulatory Commission, Hydroelectric Project No. 5, January 1984.
- **"Railroad Exemption -- Export Coal,"** Verified Statement, Interstate Commerce Commission, Ex Parte No. 346 (Sub-No. 7), December 18, 1981.
- **"Effectiveness of Time-of-Use Electricity Pricing,"** testimony before the New York Public Service Commission, Case 27319, November 1978.
- **"An Economic Evaluation of Automobile Bumper Standards,"** NHTSA Hearings on Bumper Standards, April 1975.

#### **SELECTED REPORTS:**

- **"Switched Voice Telephone Interconnection Policies,"** prepared for OFTEL (UK Office of Telecommunications) (with David Starkie), April 1992.
- **"Telecommunications Privatization in New Zealand,"** prepared for the New Zealand government, (with Robin Foster and Jeffrey Rohlf), May 1989.
- **"Economic Prospects for Six Asian Countries,"** prepared for American Airlines (with Nathaniel Jackson), May 1989.
- **"Management of the Radio Frequency Spectrum in New Zealand,"** prepared for the New Zealand Government, (with Robin Foster, Phillipa Marks, Charles Jackson and Robyn Durie), November 1988.
- **"Determining the Cost of Telephone Services: A Survey of Issues,"** prepared for the New York Telephone Company, February 1988.
- **"Obligation to Serve in Competitive Electricity Markets,"** prepared for consortium of electric utilities, January 1987.
- **"Assessing Anticompetitive Behaviour in the UK Telecommunications Industry,"** prepared for the Office of Telecommunications (OFTEL), Britain, August 1986.
- **Welfare Gains from Local Measured Telephone Service (simulation model),** prepared for Pacific Northwest Bell, 1985.

- **Profitability of Jointly Supplying Local Telephone and Cable Television Services (simulation model), prepared for Mercury Ltd., 1984.**
- **"Costs of Cable Television Franchise Requirements," prepared for the National Cable Television Association, 1984.**
- **"Quantity-Dependent Pricing of Telephone Service," prepared for New England Telephone, 1983.**
- **"Regulation of Emissions by Production Permits," prepared for E. I. DuPont DeNemours & Company, (with Lewis J. Perf), October 17, 1979.**

DECLARATION OF DEAN WANDRY

I, Dean Wandry, hereby declare under penalty of perjury that the following is true and correct to the best of my knowledge, information and belief:

1. My name is Dean Wandry. I am Vice President, Operations, Fanch Communications, Inc. Fanch and its affiliates operate 290 headends in approximately 460 franchise areas in eleven states, and provide cable service to approximately 195,000 subscribers. Fanch's systems have an average of 672 subscribers.

6. During 1992, therefore, the Greystone system had net income of \$9,398.

7. The FCC benchmark methodology would require Fanch to reduce the revenues from regulated services in the Greystone system by a total of \$18,744.

8. Fanch projects that for the next 12 months, it will have revenues of \$214,584, operating expenses of \$106,926, depreciation of \$62,000, interest expense of \$34,752, and a net profit of \$10,906.

9. Were Fanch to reduce its rates (and revenues) by

10. Under the FCC's rules and other pronouncements, Fanch must decide by June 21, 1993, whether to (i) shut the system down, ceasing service to 563 subscribers; (ii) reduce rates according to the FCC's benchmark methodology to the point where revenues do not cover all of the system's expenses; (iii) retain the existing rate structure based on a cost-of-service analysis. The FCC has not yet indicated what standards will be used for a cost-of-service showing for cable systems and has threatened that an attempt to justify rates by cost-of-service could result in a requirement that rates be reduced even below the benchmark rates, with refunds back to June 21, 1993.

11. In view of this threat, and the failure of the FCC to detail how cost-of-service showings may be made, Fanch does not have enough information to make an intelligent decision.

12. If Fanch were to reduce its rates under the benchmarks, the lost revenues could never be recovered, and the inability to meet the system's expenses would require serious consideration to shutting the system off. On the other hand, although Fanch believes that any reasonable cost-of-service analysis would justify the system's existing rates (and even a substantial increase), Fanch has no assurance at this time that what it considers a reasonable cost-of-service analysis will be employed. And the FCC has indicated that cable systems (including Fanch) may be required to make a refund to



subscribers back to June 21, 1993, for any charges above those justified by the FCC's analysis. Therefore, if Fanch chooses to retain its current rates based on a cost-of-service analysis, it runs the risk that its net losses could be even higher than the losses that would be generated for the period after June 21 under the benchmarks.

13. The FCC released its 500-plus page rate regulation order on May 3, 1993. The order contains approximately 50 pages of forms and instructions. On May 13, 1993, the FCC held a videotaped, satellite-delivered public meeting in which FCC staff members spent more than an hour explaining how to fill out the benchmark forms. Since that meeting, the FCC has issued various other pronouncements concerning the benchmark system. Fanch has attempted to understand the benchmark methodology and to perform the necessary analyses for its systems.

14. At this point, Fanch has completed benchmark calculations (including equipment and installation charges) for only six systems. We expect that we will be able to complete the analysis for 30-40 systems in time to make adjustments before June 21, 1993. We will simply be unable to complete the analyses for the other 250-260 systems by that time. Eventually, according to the FCC's instructions, we must complete the benchmark analysis for each franchise area, of which Fanch has approximately 460. Even if the cost-of-service